2003 WATER QUALITY REPORT

Leesburg
Virginia

EVERY GALLON
of Leesburg's Water

- ✓ Is carefully treated by State licensed plant operators
- ✓ Meets all water quality regulations
- ✓ Is rigorously monitored for quality

May 2004

Dear Water Customer,

This is Leesburg's 5th annual Water Quality Report. Since 1999, the U.S. Environmental Protection Agency has required water providers to publish water quality reports annually. This report will provide you with information on our drinking water. We also invite you to participate in decisions involving drinking water. We hope you will take time to study this important report. We welcome your questions and comments.

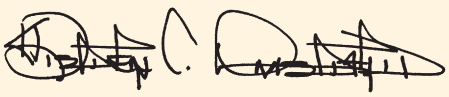
I am delighted to report that Leesburg's drinking water continued to be of consistent high quality and well within all federal and state standards for drinking water during 2003. Our goal for 2004 is to continue to produce aesthetically pleasing and chemically pure water that meets quality standards established by the Federal Safe Drinking Water Act in sufficient quantity to satisfy the needs of the citizens of the Town of Leesburg and assure adequate supply for fire protection.

In order to ensure safe drinking water and to meet federal and state requirements, Leesburg performs extensive water quality monitoring and testing. In all, we test for over 120 constituents and possible contaminants. The few detected were well below the federal and state maximum contaminant levels, and in most cases well below the goal levels. As you may recall, the Town performed addiitonal testing for lead contamination this past March. Because the Town proactively removed all the lead pipes from the water distribution system over the years, all 20 samples showed readings well below the EPA established maximum level of 0.015 mg/l. This is truly an excellent result for the Town. You'll find a summary of testing and monitoring results in the Drinking Water Analysis table. In addition to monitoring results, the report contains information about:

- the source and treatment of Leesburg's drinking water;
- drinking water regulations and general water information; and
- how to take part in Leesburg's decision-making process.

To obtain more information regarding any topic in this report, or if you have any suggestions on how we can make next year's report more useful, please call our Utilities Department at (703) 771-2750.

Sincerely,



Kristen C. Umstattd
Mayor, Town of Leesburg

Substances Detected in Our Water

SUBSTANCE (UNITS)	AVERAGE LEVEL DETECTED (RANGE)	MCL (ALLOWED)	GOAL (EPAs MCLG)	TYPICAL SOURCE	MEETS STANDARDS
Copper [1, 2] (ppm)	1.23 90th percentile level	Action Level 1.3	Action Level 1.3	Corrosion of household plumbing systems; erosion of natural deposits	✓
Fluoride [3] (ppm)	0.84 (<0.2 – 1.35)	4	4	Water additive which promotes strong teeth;erosion of natural deposits	✓
Gross Beta Activity [4,9] (pCi/L)	Rollins WFP = 1.9 Paxton Well = 4.3 Evergreen #3 Well = 1.8	50 (4 mrem/yr)	zero	Natural geology; mining	✓
Gross Alpha Activity [9] (pCi/L)	Rollins WFP = 0.0 Paxton Well = 0.7 Evergreen #3 Well = 0.6	15	zero	Natural geology; mining	✓
Haloacetic Acids (HAAs) [10] (ppb)	36 (1 – 57)	60	n/a	Byproduct of drinking water disinfection	✓
Lead [1, 5] (ppb)	4 90th percentile level	Action Level 15	zero	Corrosion of household plumbing systems; erosion of natural deposits	✓
Chlorine MRDL [10] (ppm)	1.99 (0.2 – 4.0)	4.0 MRDL	4.0	Water additive used to control microbes	✓
Nitrate/Nitrite [6] (ppm)	Rollins WFP = 1.55 Paxton Well = 4.76 Evergreen #3 Well = 8.27	10	10	Runoff from fertilizer use; septic systems; erosion of natural deposits	✓
Total Coliform Bacteria	2.5 % Highest monthly percentage	No more than 5% positive monthly samples	zero	Naturally present in the environment	✓
Total Organic Carbon (TOC) [10,11]	1.95 (1.0 –3.56)	Treatment Technique	Treatment Technique	Naturally-occurring organic matter	✓
Trihalomethanes [7] (ppb)	63 (7 – 67)	80	n/a	Byproduct of drinking water disinfection	✓
Turbidity [8] (NTU)	0.15 Highest single value	Treatment Technique	n/a	Soil runoff	✓

1 Lead and copper testing is required every three years. Data reported is from 2001. Next testing date 2004.

2 Three sampling locations exceeded the Action Level for **copper**. Copper is regulated at the customers' taps.

3 Fluoride is added to the water produced by the Town of Leesburg for its positive health benefit in the promotion of strong teeth.

4 The MCL for Beta emitters is written as 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for Beta emitters.

5 One sampling location exceeded the Action Level for **lead**. Lead is regulated at the customers' taps.

6 Nitrate Testing is required once each year.

7 The MCL for trihalomethanes is 80 ppb on an annual average basis. Our water meets the standards.

8 Turbidity levels are measured during the treatment process after filtration. The turbidity level of filtered water shall be less than or equal to 0.3 NTU in at least 95% of the measurements taken each month and less than 1 NTU at all times. The lowest monthly percentage of Town of Leesburg samples meeting the turbidity limits was 100%.

9 Alpha and Beta activity testing is required every four years. Data reported is from 2003.

10 This data is required by EPA beginning in 2002.

11 TOC is reported as a removal ratio on an annual average basis. The removal ratio must be equal or greater than 1.0.

Substances NOT Detected in Our Water

Regulated Volatile and Synthetic Chemicals including petroleum-based products, pesticides, herbicides, and industrial and synthetic chemicals were tested. **None** of these constituents were detected in our drinking water. Your drinking water was monitored for a number of **inorganic chemicals** for which the EPA has set MCLs. **None** of these constituents were detected.

Your drinking water was also monitored for **microbial contaminants** (fecal and total coliforms) for which the EPA has set MCLs. In addition, the finished water was monitored for **methyl tertiary-butyl ether** (MTBE) a gasoline additive, which is not regulated by the EPA. We are pleased to report that this contaminant was not detected during calendar year 2003.

ABBREVIATIONS & DEFINITIONS

Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL: Maximum Contaminant Level (level of contaminant that is allowed in drinking water by the EPA)

MCLG: Maximum Contaminant Level Goal (level of contaminant at which there is no known or expected risk to health)

MRDL: Maximum Residual Disinfectant Level (a measure of the chlorine residual concentration at specified points in the water distribution system)

mrem/yr: millirems per year (a measure of radiation absorbed by the body)

NTU: Nephelometric Turbidity Units (a measure of water clarity)

pCi/L: picocuries per liter (a measure of radioactivity in water)

ppb: one part per billion (corresponds to one minute in 2,000 years or one penny in $10,000,000)

ppm: one part per million (corresponds to one minute in two years or one penny in $10,000)

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water

Turbidity: A measure of the clarity of water, measured in Nephelometric Turbidity Units. Turbidity has no health effects, but can hinder the effectiveness of disinfectants. We monitor turbidity because it is a good indicator of water quality.

Water Supply Division
LEARNING ABOUT YOUR DRINKING WATER

Virginia's drinking water sources
include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material and can pick up substances resulting from the presence of animals or human activity.

Contaminants
that may be present in source water include:

- biological contaminants such as viruses and bacteria
- inorganic contaminants such as salts and metals
- organic chemicals which are by-products from industrial or petroleum use
- radioactive materials

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

The U.S. Environmental Protection Agency (EPA) is authorized by Congress to enforce the Safe Drinking Water Act Amendments of 1996 in regulating water systems for public health protection and establishing water standards. The 1996 Amendments require all water suppliers to issue a water quality report, called a consumer confidence report (CCR), to consumers on an annual basis. The Virginia Department of Health (VDH) has the responsibility for enforcing the Federal Water Quality Standards in the Commonwealth.

The Town of Leesburg is proud to report that the drinking water produced by the Department of Utilities was well within all federal and state standards for drinking water during 2003. This report is a summary of the water quality provided to our customers in 2003 and includes information about:

- your drinking water sources and quality;
- what your drinking water contains;
- drinking water regulations;
- multiple barrier programs to ensure high water quality; and
- treatment processes used to assure that our drinking water meets or exceeds federal and state regulations.

The Town of Leesburg owns and operates the Kenneth B. Rollins Water Filtration Plant which withdraws water from the Potomac River. Leesburg also has a ground water supply which consists of Evergreen #3 Well and the Paxton Well. These wells are primarily used for low flow demand periods (night time) and during emergencies. Approximately 95% of our drinking water is produced at the water filtration plant using surface water and 5% is produced by wells using groundwater.

A source water assessment of our system was conducted recently by the Virginia Department of Health. The river and well water sources were determined to be of high susceptibility to contamination using the criteria developed by the State in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. The Town, in conjunction with EPA and the Potomac River Basin Drinking Water Source Protection Partnership, is working to address concerns over susceptability to contamination. The report is available by contacting your water system representative at the phone number or address given elsewhere in this drinking water quality report.

The U.S. Environmental Protection Agency (EPA) sets MCLs at very stringent levels. In developing the standards, EPA assumes that the average adult drinks two liters of water each day throughout a 70-year lifespan. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-a-million chance of having the described health effect for other contaminants.

The State allows the Town to monitor for some contaminants less than once per year because the concentration of these contaminants does not change frequently. Some of our data, though representative, was collected prior to 2003.

OTHER DRINKING WATER CONSTITUENTS

TURBIDITY has no direct health effects and is measured to determine the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person. Drinking water turbidity is measured by Nephlometric Turbidity Units (NTUs). Regulations require that 95% of samples collected in a monthly reporting period must be less than or equal to 0.3 NTU.

The Town of Leesburg has established a more stringent goal of 0.1 NTU for finished water turbidity.

FLUORIDE in children's drinking water at approximately 1.0 ppm reduces the number of dental cavities. The Town of Leesburg adds 1.0 ppm fluoride to the drinking water to maintain the recommended range of between 0.8 ppm and 1.2 ppm fluoride concentrations.

COPPER is an essential nutrient, but some people who drink water containing copper in excess of the action level over a prolonged period could experience liver damage.

NITRATES in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Nitrate levels in Leesburg's water system are significantly lower than the regulatory limits. However, if you are caring for an infant, you should ask for advice from your health care provider.

2003 Drinking Water Analysis
UNDERSTANDING YOUR DRINKING WATER

RADIOLOGICAL

Certain minerals are radioactive and may emit forms of radiation known as alpha and beta radiation. People who drink water contaminated with alpha and beta radiation at high levels over many years may have an increased risk of getting cancer.

Results are expressed in picocuries per liter (pCi/L). The MCL expressed as an annual limit is calculated on the basis of a two-liter per day drinking water intake. Our water meets the radiological standards.

DISINFECTION BY-PRODUCTS

Disinfection is an absolutely essential component of drinking water treatment. Disinfection prevents the occurrence and spread of many serious and potentially deadly water-borne diseases such as cholera, dysentery, and typhoid. When chlorine is used for disinfection, it can react with naturally-occurring organic matter in the water that largely results from natural breakdown of vegetation, leaves, and wood. Minute amounts of disinfection byproducts can be formed as a consequence of these reactions. People who drink water that contains high levels of disinfection byproducts over a number of years may have an increased risk of health concerns such as liver, kidney, or central nervous system problems, and may have an increased risk of developing cancer. Regulations limit the amount of disinfection byproducts in your water to control these risks. Two categories of disinfection byproducts are specifically limited by these regulations: trihalomethanes (THMs) and haloacetic acids (HAAs). In addition, regulations require specified levels of removal of naturally-occurring organic matter using the total organic carbon (TOC) analysis as the specific measure and place limits on the allowable levels of chlorine (MRDL) and other disinfectants that can be used in the water system. This provides a more extensive basis of control to limit the potential for exposure to other disinfection byproducts.

Regulations require that total THMs and HAAs be reported as running annual averages to the Virginia Department of Health. Averages are calculated quarterly on samples taken at various locations throughout our distribution system. Our water meets the disinfection byproducts standards.

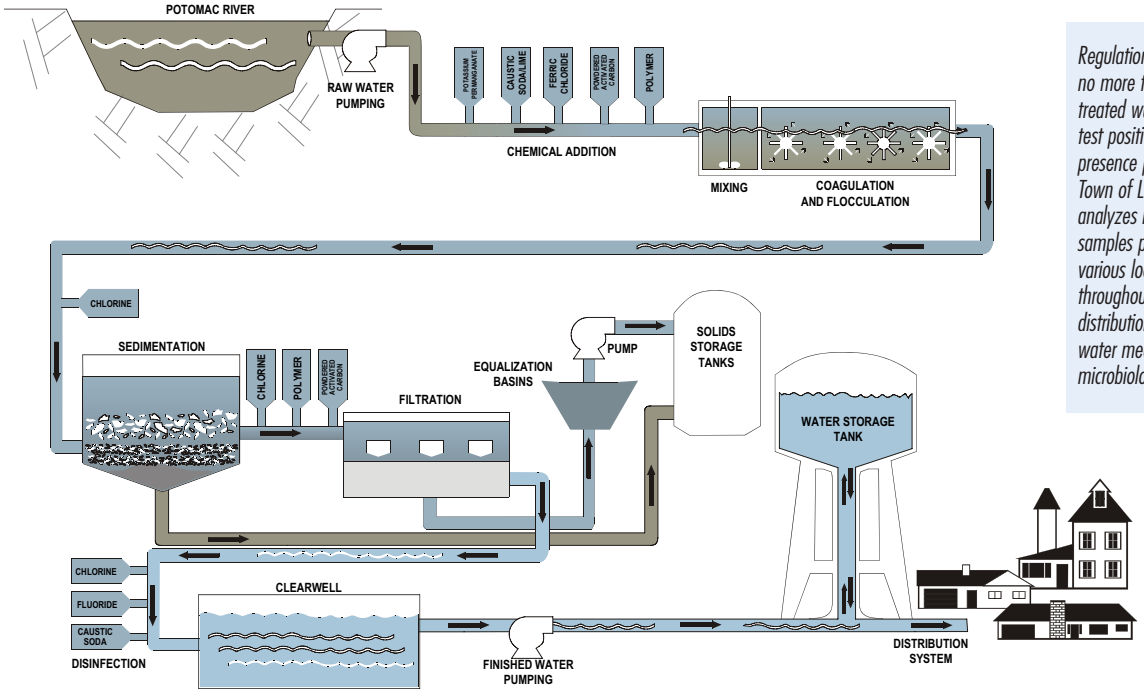
MICROBIOLOGICAL

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present. Treatment such as filtering and disinfecting the water removes or destroys the microbial contaminants. *Cryptosporidium* and *Giardia* are microscopic protozoa that, when ingested, can cause illness in humans. These parasites can be found in swimming pools, contaminated foods, daycare centers, nursing homes, streams, rivers, and drinking water. The Town of Leesburg has instituted multiple barriers of protection at the Water Filtration Plant such as enhanced coagulation, multi-media filtration, disinfection and additional turbidity removal techniques ensuring optimum removal of these parasites.

Regulations require that no more than 5% of treated water samples test positive for coliform presence per month. The Town of Leesburg analyzes more than 40 samples per month at various locations throughout our distribution system. Our water meets the microbiological standards.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons — such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, the elderly, and infants — can be particularly at risk from infections. These people should seek advice about drinking water from health care providers, the EPA, and the Center for Disease Control. Guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and Giardia are available from the Safe Drinking Water Hotline at (800) 426-4791.

FROM SOURCE TO TAP... *Kenneth B. Rollins Water Filtration Plant*



Using these treatment processes, the Town's trained and state-licensed operators have ensured that your drinking water is safe to drink and has met or surpassed all water quality standards and regulations.

LEAD is a toxic metal which accumulates in the bones of humans and animals and is linked to nervous system disorders.

Water being delivered to Leesburg residents from the Town's water filtration plant contains no lead and virtually no copper. The Town of Leesburg began lead and copper testing in 1991. The calculated 90th percentile of lead and copper concentrations have always been below established action levels of 0.015 ppm for lead and 1.3 ppm for copper.

However, your tap water may contain higher concentrations of lead because of lead leaching from plumbing inside your home. A simple precaution to minimize risk is to flush your tap for 2-3 minutes if the water has been standing in the pipes for several hours. Also, use cold water for cooking, drinking, or preparing baby formula because hot water dissolves lead more readily than cold water.

A final precaution is to make sure your plumber uses only lead-free pipes, solder, and flux when making repairs or improvements on your home plumbing system. This is a federal law.

HARDNESS is due primarily to calcium and magnesium minerals that naturally occur in water. Hard water requires more soap to form lather than soft water. Normally, if the amount of calcium carbonate ($CaCO_3$) is over 150 ppm, the water is considered to be hard. Sometimes hardness is expressed in terms of grains per gallon (gpg) of calcium carbonate. 1.0 gpg equals 17.1 ppm. Some research has concluded that hard water may lower the risk levels for heart attacks. A study suggests that for every unit of increased water hardness, there is 1% decrease in the risk of heart attacks. The Town of Leesburg's drinking water averages 130 ppm and is considered to be moderately hard.

Leesburg
Virginia

P.O. Box 88
Leesburg, VA 20178

Leesburg Urges Voluntary Water Conservation – Use Water Wisely.

Ongoing Water System
IMPROVEMENTS

The following improvements will provide required water storage and water production facilities for town citizens dictated by population growth and demand.

- A 1.5 million gallon elevated water storage tank will be designed for construction in the Sycolin Road Pressure Zone.
- Land will be acquired for the design and construction of a 1.5 million gallon elevated water storage tank adjacent to the existing Carr water storage tank.
- The Kenneth B. Rollins Water Filtration Plant will ultimately be expanded to a capacity of 15 million gallons per day. Design of the expansion is currently under way.
- The Woodlea Manor Booster Pumping Station is in the final design phase and will be constructed in 2004.

Customer feedback is important to the Town of Leesburg Department of Utilities. Questions about water quality can be answered by calling the Water Supply Division at (703) 737-7110.

For more information concerning our water quality, or to share feedback, call the Town of Leesburg's Water Supply Division at (703) 737-7110. For additional copies of this report, call the Town of Leesburg Department of Utilities at (703) 771-2750. An online report is available at www.leesburgva.org.

Para mas información sobre la calidad de nuestra agua favor de llamar al Departmento del Agua del Town of Leesburg al telefono (703) 737-7110. Para copia de este reporte llame al Departmento del Utilidades del Town of Leesburg al telefono (703) 771-2750. Puede conseguir una copia de este reporte en nuestro website www.leesburgva.org.

Customers who want to become involved in drinking water issues can attend Town Council meetings at 7:30 p.m. on the second and fourth Tuesdays of each month in the Town Council Chambers, Leesburg Municipal Government Center, 25 West Market Street in Leesburg.